

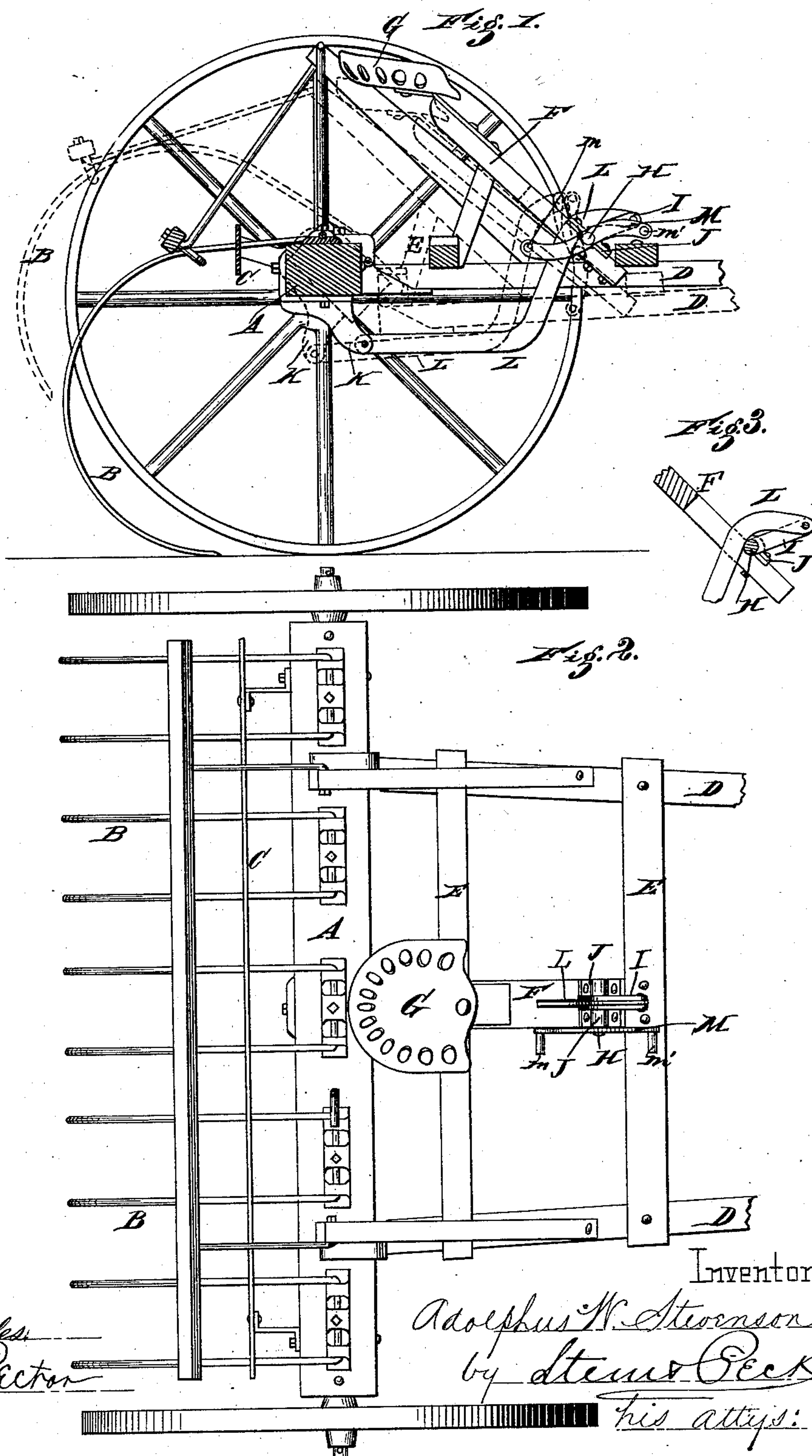
(No Model.)

A. W. STEVENSON.

HORSE HAY RAKE.

No. 308,578.

Patented Nov. 25, 1884.



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# UNITED STATES PATENT OFFICE.

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## HORSE HAY-RAKE.

SPECIFICATION forming part of Letters Patent No. 308,578, dated November 25, 1884.

Application filed August 15, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, ADOLPHUS W. STEVENSON, a citizen of the United States, residing at Troy, in the county of Miami and State of Ohio, have invented certain new and useful Improvements in Horse Hay-Rakes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making a part of this specification.

My invention relates to that class of horse hay-rakes in which the draft-frame is hinged to the axle, which is turned, when tripped by the weight of the driver, to throw up the rake-teeth and dump the hay. In my invention this is accomplished by attaching the spindles on which the wheels revolve to the bottom of the main axle. The draft-frame is hinged to this axle at or near its upper front corner in such a manner that the weight of the frame and driver assist in tilting the axle to which the teeth are attached, thereby lifting the teeth to discharge the hay.

My present invention relates more particularly to the novel arrangement of the device for locking the rake-teeth in position for raking, so as to prevent the rake from dumping at the wrong time.

In the accompanying drawings, Figure 1 is a side view of the rake, showing the teeth and locking device in two positions. Fig. 2 is a plan view of the rake. Fig. 3 is a section showing a part of the lock.

The axle A is preferably made square, and the teeth B are attached to the axle either on the top, as shown in the drawings, or in any other suitable manner, provided they are lifted as the axle is revolved forward.

C is a guide for holding the rake-teeth in place and properly spacing them, the guide being provided with vertical slots through which the teeth pass.

D D are the shafts or thills, and E E are cross-bars or thill-braces which, with the thills, form the draft-frame.

F is a seat-standard supported on the thill-braces, as shown. On the upper end of this seat-standard is fastened the driver's seat G. To this seat-standard, near its lower end, is attached a rock-shaft, H, by means of the boxing J. This rock-shaft is provided with an arm, I, which may be attached to the end of

the rock-shaft or, preferably, as shown in the drawings, at or near the middle, in which case the seat-standard is provided with a slot of such length and size as to admit the proper working of the coupling-rod L.

K is a lug on the lower side of the axle, whose length or downward extension can be varied, as desired, for altering the leverage of the locking and dumping devices. L is a coupling-rod, the rear end of which is pivoted to the lug K. The other end is bent upward and forward, substantially as shown in the drawings, and is pivoted to the end of the arm I of the rock-shaft H. The forward part of this coupling-bar L passes to the rear of the rock-shaft and bends over and extends forward of it. As the rock-shaft and its arm I are oscillated the coupling-bar L is thrown back or forward. When in the forward position, the coupling-rod L rests on the top of the rock-shaft, which thus forms a stop, and the end where pivoted to the arm I is below the center of motion of the rock-shaft—that is, below a straight line drawn through the rear pivot of the coupling-rod and the center of the rock-shaft—so that in that position a lock is formed by which the coupling is held rigidly in place, and the axle of the rake cannot oscillate, but is held firmly in position with the teeth on the ground, so as to gather the hay. A slight turning of the rock-shaft, so as to lift the arm I toward the position indicated by the dotted lines, immediately releases the lock, when the weight of the driver tilts the axle forward, throwing the coupling-rod L backward and lifting the teeth of the rake, so as to dump the load of hay. Of course this action is assisted by the resistance of the hay against the forward motion or draft of the rake.

In order to operate the rock-shaft for locking or unlocking the rake, I provide on one end of the rock-shaft a double crank, M, with foot-pieces *m* and *m'* within reach of the driver. By pressing on the forward foot-piece, *m'*, the arm I is thrown forward and down, carrying with it the end of the coupling-bar L, and locking the rake. By pressing on the rear foot-piece, *m*, the rock-shaft is tilted the other way and the lock broken, permitting the rake to be dumped by the weight of the driver, as described. When the rake is locked, as de-



scribed, this form of coupling secures an equal draft from both top and bottom of the axle— from the top through the shafts which are directly attached to it, and from the bottom by the coupling-rod L, which is held rigid by the lock. When the lock is released, the draft is from the top of the axle alone. As will be noticed, the arm I extends upward when the lock is released, and when locked the coupling rests on the rock - shaft and cannot be shaken loose. At the same time it is very easily dumped by a pressure of the driver's foot on the rear arm of the crank M.

I am aware that a rocking axle and a draft-bar attached thereto, whereby the rake is dumped by the weight of the driver, is not new, and do not claim, broadly, such a construction.

Having thus fully described my invention, I claim—

1. In a horse hay-rake, the combination of the oscillating axle, the rake-teeth secured thereto, the rock-shaft H, provided with the arm I, and the coupling-rod L, pivoted to the lower part of the axle and extending forward and upward in the rear of the rock-shaft, its forward portion curved partly around said shaft and pivoted to said arm I, as and for the purpose specified.

2. In a horse hay-rake, the rocking axle and rake-teeth secured thereto, in combination with the rock-shaft H, provided with an upwardly and forwardly extending arm, I, and the coupling-rod L, connecting the said arm and axle, substantially as and for the purpose specified.

ADOLPHUS W. STEVENSON.

Witnesses:

GEORGE GREEN,  
JEAN SMITH.